



The 11th Hour Files

Simply Inflation

Definitions and measure

- *Inflation*: A sustained increase in the average price level
- *Disinflation*: When the rate of inflation decreases so that prices continue to increase but at a slower rate → a positive rate of inflation but lower than that of the previous period
- *Deflation*: A sustained decrease in the average price level → a negative rate of inflation
- *Inflation rate*: the percentage change of the average price level between two periods

The average price level faced by the typical consumer is measured through the CPI → the basket of goods/services is determined through surveys

- CPI → the average price level the typical consumer faces expressed as a price index
- CPI → it is a weighted average where the weight of each good is the proportion of total expenditure on it → $w_i = \frac{e_i}{\sum e_i}$, where e_i is the expenditure on good i and $\sum e_i$ are total expenditures of the typical consumer
- CPI → an index number has no units of measurement as it is a percentage of the value of the variable each period measured with respect to its value in a given period (the 'base' year) → as a result, the base year value (of the CPI) is 100

Thus:

$$\text{Inflation Rate} = \% \Delta \text{CPI}$$

$$\text{or, Inflation in 2010} = \frac{\text{CPI}_{2010} - \text{CPI}_{2009}}{\text{CPI}_{2009}} \times 100$$

Problems of measurement

- Since the CPI is the average of the prices the *typical* consumer faces it doesn't reflect actual consumption patterns (i.e. the prices faced) of any specific individual or group of individuals
- Quality improvements that may effectively render a good 'cheaper' are not sufficiently accounted for → **quality bias** → so, published inflation may overestimate actual rate
- More and more people are buying more and more goods from the net or from megastores where prices are typically lower → to the extent that prices from such outlets are not sufficiently sampled there will be an overestimation issue again → **new retail outlet bias**
- When a good becomes pricier people will tend to substitute other goods for it decreasing its significance → since the weight is fixed there will be an overestimation issue again → **substitution bias**
- New goods arrive but they are included in the CPI only after considerable time → **new product bias**

Consequences of Inflation

- Inflation decreases the purchasing power of individuals on fixed money incomes (wage earners, pensioners etc.)

- Unanticipated inflation benefits borrowers at the expense of lenders; since banks are the lenders and they are, of course, aware of this possibility, they charge higher than necessary interest rates on loans thus depressing the level of investment and consumption
- Since income tax brackets are not frequently adjusted, inflation redistributes income from taxpayers to the government as people are bumped into higher tax brackets without their real incomes increasing as fast
- Inflation increases uncertainty for businesses, making it more difficult to judge the profitability of an investment plan → fewer investments materialize → growth slower → job creation slower
- Inflation distorts the signaling power of relative price changes as firms cannot be sure that an observed price increase is truly a result of excess demand → resources are misallocated → inefficiency
- On the other hand, mild inflation may be desirable as it lowers the real wage inducing firms to raise output
- In addition, the fact that the official inflation rate most probably overestimates true inflation has led Central Banks to define price stability not as zero inflation but as a low positive rate → the ECB aims at a rate below *but close* to 2% → goal is to avoid deflation

Types of inflation

Demand-Pull

If AD is rising (faster than AS) because of

- exuberant expectations
- profligate government spending
- a surge in exports

- excessive monetary growth → ‘too much money chasing after too few goods’
→ Friedman’s ‘helicopter money drop’ → ‘inflation is always and everywhere a purely monetary phenomenon’
- inflationary expectations themselves

Cost-push

Adverse shifts in the Aggregate Supply because of

- increased price of oil/energy
- increased commodity prices
- increased money wages (without commensurate increases in productivity)
- a depreciating currency that increases price of imported materials and intermediate goods
- an across-the-board increase in indirect taxation

POLICIES TO ADDRESS INFLATION

→ Contractionary Demand Side Policies

Tighter Monetary Policy

How does it work?

- higher interest rates will decrease C and I as borrowing costs for households and firms are higher and saving for households is more attractive → AD decreases
- higher interest rates will induce capital inflows → the exchange rate will appreciate → P_x rise abroad while P_m decrease domestically → NX decrease
→ AD decreases

Contractionary Fiscal Policy

How does it work?

- The Government could decrease $G \rightarrow$ since it is a component of AD , AD decreases
- The Government could also raise $T \rightarrow$ disposable income decreases $\rightarrow C$ and thus AD decreases

Which policy is better?

- Remember that the responsibility for price stability rests with the Central Bank of a country \rightarrow it is in charge of monetary policy \rightarrow thus, the first choice policy is tighter monetary policy
- Monetary policy has a tremendous advantage as it is incremental \rightarrow interest rates can be increased 0.25% at a time
- It is also easily reversible: if tightening proves too much, the CB can easily loosen it
- On the other hand, fiscal policy is neither incremental, nor easily reversible
- It is also difficult to decide which expenditures should be cut
- Policymakers must also have a pretty good idea of the size of the multiplier: contractionary fiscal can decrease real output more than anticipated if the multiplier is underestimated \rightarrow The IMF realized that Greece's fiscal multiplier was actually 3 times bigger than estimated but in the meantime pushed Greece deeper into recession \rightarrow Olivier Blanchard, its Chief Economist, issued a *mea culpa*, but tell that to those who lost their jobs
- Also, some claim that an increase in (direct) taxation could lead to diminished incentives to work & to invest

- On the other hand, if inflation is the result of profligate government spending, there is no question that the Government should cut back spending

What about supply-side policies?

- Always useful, especially in economies with insufficient competition in product markets and extremely rigid labor markets
- But, they are never the first response as they take long to be implemented and even longer to have the desired effects

Deflation, causes of

- There is no such thing as 'good' deflation → if a country gets caught in deflation then it will be very difficult to get out no matter what caused it
- Typically, deflation is a result of a deep and prolonged recession that has been decreasing AD for long resulting in lower and lower inflation and eventually, deflation
- It could also be the result of overly optimistic firms which overinvested in capacity expanding projects expecting a boom that never materialized → excess capacity forced price cuts
- The issue is that once deflation kicks-in, deflationary expectations set-in and cannot be easily uprooted

Deflation, consequences

- Economy may enter a deflationary trap → deflation creates more deflation
- Consumers delay purchases → AD decreases more → prices further decrease

- Firms' revenues decrease → forced to cut costs → wages fall → layoffs → some firms go bankrupt → AD decreases more
- Real value of debt rises → Consumers and firms cut down on spending → AD decreases more
- Some households and firms cannot service their loans → risk of a banking crisis
- As AD falls real output falls and unemployment rise
- Since interest rates are close to zero there is no room for looser monetary policy
- Even expansionary fiscal is of limited use as households will avoid spending and often governments are already burdened by high debt
- Exports at least become more competitive

Deflation, policies

- Only unorthodox monetary policies *may* work → massive quantitative easing (QE) → ask Mr. Kuroda, the BOJ Governor, who is pumping \$666 billion a year to help convince Japanese consumers that prices will soon start rising

Tips for P3 inflation related questions

- Typically, you will be asked to calculate inflation rates
- First, calculate the cost of the basket in each of the 3 (or, 4) years given
- Then, calculate the CPI for each year by dividing the cost of the basket in each year by the cost of the basket in the (given) base year and multiplying by 100
- Calculate the inflation rate for each year as the percentage change in the CPI between each year and the previous year
- If it is a negative change it is deflation; if it is a positive change but smaller than that of the previous year, it is disinflation